DOCUMENT RESUME

ED 236 754 EA 015 885

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TITLE Exemplary Schools and Their Identification.
PUB DATE Mar 81
NOTE 19p.
PUB TYPE Information Analyses (070) -- Journal Articles (080)
JOURNAL CIT New Directions for Testing and Measurement; n10 p31-48 1981

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Academic Achievement; *Educational Assessment; Educational Improvement; *Educational Research; Elementary Secondary Education; Leadership Styles; Parent School Relationship; Principals; Regression (Statistics); Research Methodology; *School Effectiveness; Student Attitudes; Teacher Characteristics; Teaching Methods
IDENTIFIERS *Exemplary Schools

ABSTRACT

Analyzed in this report is salient research on exemplary schools based on alternative models of identifying exemplary programs by expert judgment or by regression analysis. The conclusion is that characteristics of exemplary schools are remarkably similar regardless of how they are identified, supporting the view that the characteristics are generalized rather than method-specific. A summary of research findings outlines characteristics including: principals' leadership and instructional training; teachers' high expectations and effective classroom management techniques; students' sense of control of their destiny and belief in hard work; parents' involvement and perception of belonging to an educational partnership; high expectations for all students and staff; organizational principles including high priority for instructional activities; instructional practices such as clear identification of academic objectives, use of small groups or individualized instruction for reading and mathematics, direct instruction, and consideration of students' prior learning and learning styles. The alternative methods of exemplary school identification are judged valid, and the high performance of exemplary schools is not to be accounted for by chance or statistical error. Pinpointed as key elements of exemplary schools are the principal's leadership style and the high number of mediating structures, or adult interpretations, that reflect positively on students' abilities. Policy implications are drawn. (MJL)

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*The identification of exceptional schools and their characteristics provides important insights for improving the average school.*

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# Exemplary Schools and Their Identification

Gilbert R. Austin

In any research literature there are several milestones, important documents that have changed the complexion, emphasis, and techniques of the profession. There can be many reasons why a work is a milestone—quality and breadth of the questions asked and answered is one obvious reason. The scale of public recognition of the Coleman Report in the United States (Coleman, 1966) and the Plowden Report (1967) in England make them vital documents in the annals of educational research.

The idea for the Coleman survey originated with the Justice Department, apparently so that Justice could document willful discrimination in education. This is one of the few examples in our country's history of a congressional request for social research that could provide a basis for policy.

Because of increasing concerns about primary education in England, the Minister of Education requested that a study be conducted "to consider primary education in all its aspects and the transition to secondary education." In August 1963, the Central Advisory Council for Education began work on the study, which became known as the Plowden Report, after its chair, Lady Bridgit Plowden. The report was based on two years of work in England and abroad that collected voluminous data through interviews, school visits, and questionnaires. Every aspect of primary education was examined.

The authors of the Coleman and Plowden Reports concluded that schools bring little influence to bear on children's achievement that is independent of their family background and social environment. This means that the inequalities imposed on children by their home, neighborhood, and peer environment tend to be carried along to become the inequalities with which they confront adult life at the end of school. Equality of educational opportunity thro ,gh the schools implies that the effect of schools is strong and independent of the child's immediate social environment, but that strong independent effect is not present in American or English schools.

It is important to remember that both reports compare only children who are attending school. Both Coleman and Plowden acknowledge that schools make an important and significant contribution to children's lives and to equalizing their life chances. At the most fundamental level, this point can be made by comparing the effect of schooling with no schooling. Unfortunately, there is little in the literature on this topic. One study, by Green and others (1966), was conducted in Prince Edward County, Virginia, which closed its public schools between 1959 and 1961 rather than comply with a court order to integrate them. As a result, some children in the county did not go to school during this period. Comparisons between children who stayed in the county but did not go to school and peers who went to private school or who left the county to attend school elsewhere showed that the children who did not attend school failed to progress and in many cases even regressed in their intellectual abilities and school-related achievement.

In Great Britain and Ireland, the same effect was observed in children whose education was interrupted by World War II. The Plowden data indicate not only that school helps all children of whatever ability to make progress but that its absence causes them to regress in their abilities. Making the same point from a different perspective, Jencks (1972) states that "Elementary schooling is helpful for middle-class children and crucial for lower-class children" (p. 89).

### ESEA Evaluations

The findings of the Coleman and Plowden reports are supported by the results of many evaluations of the Elementary and Secondary Education Act (ESEA): TEMPO (TEMPO, 1968); Technomics, Inc. (1968); Scientific Educational Systems (1970); Kirst (1967); Ginsberg and others (1970); Evans (1969); Hanushek (1972) and McLaughlin (1975). When the evaluations of programs financed by the ESEA and other acts were published, the confidence of educators in themselves was shaken and the confidence of the public in educators was shattered.

**Expert Judgment Model.** Because the evaluations listed in the preceding paragraph produced rather disappointing results, the U.S. Office of Education (USOE) proposed in 1967 that instead of attempting to determine what was true of all programs across the United States an attempt should be

made to determine what was true about programs identified as exemplary. The idea was that if a series of exemplary programs for teaching disadvantaged children could be identified, these programs could be widely disseminated, school systems would adopt them, and progress would thereby be made. This approach depended primarily on nominations based on the "expert judgment" of local and state educational authorities to identify the exemplary programs. This chapter will refer to this method of identifying and selecting exemplary schools as the *expert authority* model. The long-term objective of this effort was to encourage local agencies to implement compensatory education programs that had demonstrated their success in order to maximize the impact of compensatory education programs on disadvantaged students.

Each of the seven studies funded by USOE between 1965 and 1972 focused on one or more of the following activities: identification of successful compensatory education projects, analysis of the characteristics of successful programs, identification of project components that differentiated successful projects from unsuccessful projects, follow-up on previously identified successes, or analysis of interstudy agreement. Most of the early comprehensive studies included identification of projects and analysis of successful program characteristics.

More than 1,000 compensatory education programs were identified using the authority model. In addition, a literature search was carried out, largely by the Educational Resource Information Centers (ERIC). Then, with the assistance of a panel of expert authorities, a list of about 100 programs was compiled; each of them was believed to have enabled its pupils to make greater gains in cognitive achievement than they would have made without the program. Ultimately, the contractors made on-site visits to the selected programs. No program was accepted for description unless data indicated that pupils in the program had achieved statistically significant better scores on standardized tests than controls had made or than could be expected from national norms. During the analysis of site data, it became evident that few if any compensatory programs were free from errors in sampling, design, testing, data recording, or interpretation. Many seemingly successful programs could not meet the strict criteria established for these studies. Some that did meet them may have done so as a result of undetected bias in their data, not of their educational significance or success.

One of the most comprehensive searches for successful compensatory education programs was conducted by Wargo, Campeau, and Tallmadge in 1971. More than 1,200 documents related to possible successful compensatory education projects were identified and reviewed. On the basis of a preliminary analysis of these documents, 422 candidate projects were identified for further review. Wargo and his associates report that, of the 422 candidate projects identified, slightly more than three quarters (326 projects) provided more detailed information upon which their successes could be judged. After an in-depth review of the evaluation results associated with each of these projects,

316 were rejected as not meeting the minimum standards of evaluation soundness and the criteria of statistically and educationally significant gains. Only 10 projects were determined to be successful compensatory education programs. Most of the other teams that have been involved in such searches report similarly discouraging results (Wargo, 1977).

Hawkridge, Tallmadge, and Larson (1968) reviewed a number of these studies in an attempt to identify the essential components of the successful programs. Eighteen successful programs were matched with twenty-five unsuccessful programs. The research effort identified ninety components, which were both qualitative and quantitative in nature. The component that was found to have the greatest effect was termed *content-oriented approaches.* This component involved identifying the objectives of the program carefully and working toward their attainment while constantly evaluating the success of the program in reaching those objectives. The following features were more characteristic of successful than of unsuccessful programs at various grade levels (Hawkridge, Tallmadge, and Larson, 1968):

1. *Preschool Programs.* (a) Careful planning, including statement of objectives, (b) Teacher training in the method of the program, (c) Small groups and a high degree of individualization, (d) Instruction and materials closely relevant to the objectives.

2. *Elementary School Programs.* (a) Academic objectives clearly stated, (b) Active parental involvement, particularly as motivators, (c) Individual attention for pupils' learning problems, (d) High intensity of treatment.

3. *Secondary School Programs.* (a) Academic objectives clearly stated, (b) Individualization of instruction, (c) Directly relevant information.

Problems encountered during this early search for exemplary programs included poor or nonexistent documentation of project evaluations, nethodologically unsound local project evaluations, reluctance of some project directors to assist in in-depth reanalysis of their evaluation findings, and difficulty in developing a set of criteria by which projects could be judged successful.

The problem of criteria continues to plague researchers in this and related areas. Criteria used to define success have ranged from judgments of expert authority to demonstration of cognitive benefits. The trend has been increasingly to rely on objective evidence of cognitive gains. In general, evaluators have agreed that results must be based upon sound methodology and that differences favoring the treatment group or demonstrated gains within a group must be reliably measured and statistically significant (Wargo, Campeau, and Tallmadge, 1971).

**Regression Model.** At the same time that the expert authority groups were undertaking to identify exceptional schools, other researchers were using a different approach, referred to here as the *regression model.* Instead of comparing schools on the basis of output achievement test scores, these researchers sought to measure effectiveness by the deviations between actual

test scores and scores predicted from variables over which schools have no control.

Henry Dyer (1966) proposed a general model that takes into consideration variables that cannot be manipulated by schools. The Dyer model predicts student performance from hard-to-change surrounding conditions and student input performance. The hard-to-change surrounding conditions include student, home, and community characteristics related to achievement and not under the direct control of the school. The most common method of implementing the Dyer model is regression analysis, which uses mean values of predictor variables to predict mean output achievement. For example, to examine the effectiveness of reading in grades 3 and 5, the intelligence quotient, the reading achievement mean, and mean values of demographic variables were used to predict a mean score for reading achievement. The discrepancy between a school's predicted performance and its actual performance was interpreted as a measure of its relative effectiveness for the time period studied.

## Expectations and Achievement

Ideally, school effectiveness measures will be based on the amount of growth in achievement adjusted for the nonschool characteristics that have been shown to be related to achievement status and achievement growth. Implementation of this idea model requires a longitudinal sample to measure achievement growth and information on demographic variables that are not under the control of the school (Burk, 1979).

The study by Robert Klitgaard and George Hall (1973), which builds on the work of Dyer, raises a question of central concern to the author of this chapter. Noting that large-scale statistical studies have failed to identify any important and consistent school effects, they suggest: "Perhaps educational research has looked in the wrong places for evidence of effectiveness. Previous studies have indicated that, on average, school policies do not greatly affect measurable student scholastic and occupational performance. Suppose this is true. Might there remain, nevertheless, a group of schools that are different? Are there any exceptions to small average tendencies and insignificant regression coefficients? The mathematics of previous studies allow for such a possibility, as long as the number of exceptions is not large" (p. 147).

Klitgaard and Hall examined six data sets developed by searches for exemplary schools. The data came from Michigan and New York City elementary schools, Project Talent, New York state school districts, New York state schools, and Project Yardstick. They did identify groups of overachieving schools, which comprised between 2 and 9 percent of various samples. From a policy standpoint, they characterized these schools as being "statistically 'unusual'," but whether the schools can also be considered unusually effective depends on one's subjective scale of magnitude. These authors concluded that "moving away from average effects in educational research and

policymaking does seem worthwhile. We have located schools and districts that consistently perform better than their peers. It is probably worthwhile to continue such research and to begin looking for unusually effective classrooms and programs" (p. 147).

The basic theory that underlies this research is that the behavior of children in school, including their achievement in academic subjects, is a reflection in part of the unspoken expectation of the school. The children learn to behave in the ways that the people with whom they interact and who are important to them expect and define as appropriate and proper for them. Individual students thus come to perceive the norms, expectations, values, and beliefs that are considered relevant for them as they interact with others in the social system of the school. Dyer (1966) hypothesized that each school develops a set of norms, evaluations, and expectations characterizing the achievement expected of students in general and of specific student subgroups within the school. While different norms, expectations, and evaluations for the various groups and individual students within a school account for some variation within the school, Dyer hypothesized that there are differences in the subcultures of schools that also explain differences in achievement between schools.

The research in this developing field of inquiry is guided by a fairly simple set of assumptions and relationships—not yet specified sufficiently to be called a model. The general nature of the school community and, more specifically, the socioeconomic and racial composition of the student body are the basis of a perception of the appropriate and proper levels of achievement that can be expected of students in a school by the principal, other administrators, and teachers. Through interaction with students and with each other, teachers, administrators, and others involved in the school social system communicate their perception of appropriate and proper achievement and their expectations and evaluations of students to the students. Students perceive the norms and expectations of teachers, principals, and others associated with the school community and develop their own norms and beliefs about what is appropriate and possible for them to achieve in the school system. This process of interaction significantly affects the nature of student achievement. Researchers concerned with the identification of exemplary schools must therefore do two things: identify the academic norms, expectations, evaluations, and beliefs that characterize schools and determine the extent to which such variables explain the differences in mean student achievement between schools (Brookover and others, 1979).

### Six State Studies

A number of studies of exemplary schools have been done using essentially the method suggested by Dyer and outlined by Klitgaard and Hall. Six states—California, Michigan, New York, Pennsylvania, Delaware and Maryland—conducted relatively extensive studies to identify exemplary

schools, and all used a relatively similar methodology. This methodology is as follows: As a result of the Coleman and Plowden studies, people have generally agreed that the performance of schools can be predicted from a number of environmentally related issues, including socioeconomic background variables, the children's general level of intellectual ability, and racial composition. All six studies have tried to build a regression equation that takes into account the racial composition, the socioeconomic background variables, and the intellectual abilities of children in various schools. Then they predict how well the children will do on an achievement test. Any discrepancy between the actual and the predicted achievement is called a *residual.* In general, schools with high residuals are considered to be doing better than one is justified in expecting, and schools with low or negative residuals are judged to be doing less well than one is justified in expecting.

In most cases, schools have been identified as successful on the basis of more than one year of testing. As Dyer (1966) suggested, schools are chosen after review of performance levels for several years. Once schools are identified, the study tends to become a series of case studies in which schools with high and low residuals are examined in a detailed way for a relatively extensive period of time. In almost all six studies, the researchers developed a series of questionnaires administered to principals, teachers, children, parents, and aides in the schools. These questionnaires have commonly been of two types: a statistical questionnaire that collects demographic background information and an attitudinal questionnaire that seeks information on the attitudes held in relation to the school. Some studies have also involved classroom observations in which researchers observed the actual classroom behavior of teachers and students in an attempt to identify factors that could account for the differences.

Most of the state studies reviewed here were conducted with the active cooperation of the state department of education and a research unit at the state university. Other studies concerned with the identification of exemplary schools have been conducted, but the six described here seem to be a representative sample of studies using the general methodology suggested by Dyer for identifying exemplary schools.

**California.** "The California legislature authorized funding of the school effectiveness study to identify the socioeconomic, financial, and educational variables affecting students' achievement in a set of specifically selected schools. Designed and conducted by the California State Department of Education during 1974 and 1975, this study examined those factors that distinguish schools in which student achievement scores are unusually high from those schools in which the students' achievement scores are unusually low." (California State Department of Education, 1977.) Unlike studies that isolate socioeconomic factors, this study was designed to identify program characteristics that influence student achievement. Consequently, the study had two purposes: to isolate the school factors capable of affecting achievement from the environmental and background factors that affect achieve-

ment and to improve sampling procedures for school effectiveness studies of student achievement.

Thus, the main purpose of the California study was to shed light on the observed fact that some schools continually attain higher student achievement levels than others, even when vitally important background factors for both groups are virtually identical. To conduct the study, twenty-one pairs of elementary schools were selected from approximately 5,500 schools with the aid of a regression equation that included four variables: an index of socioeconomic status, the percentage of students from five racial ethnic categories (American Indian, black, Asian American, Spanish-surnamed, and others), an index of bilingualism, and the number of sixth graders taking the sixth-grade achievement test. Early analysis of the data led to the creation of four levels of stratification: urbanism (cities, suburbs, and rural); socioeconomic status (high, medium, and low); total percentage minority enrollment (high, medium, and low); and school size as measured by the number of sixth graders taking the test (high, medium, and low). Residuals from predicted scores were used to create separate groups of very high-achieving and very low-achieving schools for each regression equation for all years studied. Paired schools were substantially similar for each of their predictor variables but extremely dissimilar in student achievement. Scores on the Comprehensive Tests of Basic Skills were used to select schools for inclusion in the school effectiveness study. The forty-two schools selected covered the full range of values for all the selection variables—nature of setting, parental income, ethnic makeup, and school size. One interesting aspect of the California study is that observation teams were sent to the schools selected to confirm the selection procedures. The observation team consisted of four persons, one employee from the state department of education and three administrators from school districts and offices of county superintendents of schools. The observers were not told which schools were high-achieving and which were low-achieving, nor were they told which schools were paired. At the end of their two-day visit, the observers were asked to assess whether the school they were visiting was a high-achieving or a low-achieving school. The level of agreement was 73 percent correct judgments and 27 percent incorrect judgments. This suggests that the schools were substantially different.

Eight instruments were created to analyze the effectiveness of sample schools: a principal questionnaire, a teacher questionnaire, a principal interview, a teacher interview, classroom observations, photographs of the school environment, fiscal data, and judgments.

Since findings of the studies across the six states are quite similar, individual findings for California will not be presented here but in the summary and conclusions of this chapter.

**Michigan.** The schools studied in Michigan were a random sample of the public elementary schools in Michigan. The sample consisted of three groups of schools: a state sample (sixty-eight schools), a black school sample (thirty schools), and a white school sample (sixty-one schools). The state

sample constituted a random sample of Michigan public schools containing fourth- and fifth-grade students. The white school sample consisted of schools in the state sample whose student population was more than 50 percent white. The black school sample was composed of seven majority black schools in the state sample and twenty-three other majority black schools randomly selected from the majority black Michigan public schools containing fourth- and fifth-grade students.

The data for the study were obtained from four sources: the Michigan School Assessment Reports, student questionnaires administered to fourth- and fifth-grade students, questionnaires administered to teachers of fourth- and fifth-grade students, and school principals. There were three independent variables: input (socioeconomic status of students and characteristics of teachers), school social structure, and school climate. There were three dependent variables: mean school achievement, mean student self-concept of academic ability, and mean student self-reliance. The input variables were the social composition of the student body and characteristics of teachers and other personnel inputs into the social system. Five variables were categorized under school social structure: parent involvement in the school, differentiation among school programs, open and closed classroom organization, time allocation, and staff satisfaction with school structure. Three major school climate variables were identified: student climate, teacher climate, and principal climate. Under each of those, four or five subareas were identified.

The mean school achievement was defined as the average of the percentage of students mastering each of the forty-nine objectives of the Michigan School Assessment Test. The self-concept of academic ability scale was developed by Michigan State University. The student self-reliance measure was a modification of an instrument developed by the Center for the Study of School Organization, Johns Hopkins University.

After detailed analysis of the effects of these different variables, the Michigan team selected four elementary schools for intensive case studies. All four schools were of lower socioeconomic status. Two of them performed less well than could be expected, and two performed markedly better. The case studies sought to understand what accounted for the discrepancy in achievement among the four schools (Brookover and others, 1974.)

**New York.** The New York report was the result of three sets of studies: a regression study, an outlier study, and an observational study.

The regression study was carried out by the Bureau of School Programs and Evaluations. It used a methodology very similar to that used for the Coleman report; that is, the effects of nonschool factors were controlled for, and a unique contribution of school variables was studied. The variables used to control for nonschool factors included total population of district, percent rural population, percent of children living in a two-parent family, percent of owner-occupied housing units, percent of population living in units with more than one person per room, percent of population living in units lacking some plumbing, state aid ratio, and prior achievement. The analysis looked at such

things as attendance rate, mobility, enrollment, teacher characteristics, and teacher salaries, and all these were compared with the students' general level of achievement.

The outlier study used multiple regression analysis to identify schools that were performing either above or below their predicted level of achievement as computed from nonschool factors. The study focused on school buildings, not school districts. Three groups of schools were identified: high outlier schools (schools whose mean achievement scores were well above their predicted scores), low outlier schools (schools whose actual scores fell near their predicted scores) and midlier schools (schools whose actual scores fell near their predicted scores). Three groups of schools were compared through analysis of variance in an attempt to determine the effect of a number of variables that reflected school processes. The strategy used to obtain the expected level of achievement and the criterion measure was to control for variables that could be considered indicators of student background and that were relatively immune to change as a result of school efforts. A number of these background variables were identified in the data routinely collected by the state education department through its Basic Educational Data Systems (BEDS). Among them were whether the school was public or private; the percentage of black students in the student body; the percentage of Spanish-American students; the percentage of students from families primarily supported by public assistance; and the geographical location of the school—in New York City, in an urban area other than New York City, in a suburb of a major city, or in a primarily rural area. In the equation, a predicted criterion score was calculated for the third and sixth grade of 2,624 schools. Ultimately, 148 schools were identified as positive residuals. Of this number, 43 (29 percent) were private schools, and 105 were public schools. There were 145 schools in the residual group. Fifty (34 percent) were private, 95 (66 percent) were public. In the nondeviate group, 104 (32 percent) were private, and 219 (68 percent) were public.

In the observational study, fourteen of the schools identified as above or below predicted achievement by the outlier study were observed. To determine the extent to which school environment, school program, and administrative conditions were related to test results, observational instruments, interviews, and questionnaires were used to obtain information about classroom activities, interactions among students and between students and staff members, and perceptions of staff members. The schools then became targets for structured observations carried out by private contractors. On the basis of these observations, the members of the evaluation team classified eight of ten high and low schools correctly, and seven of ten cases were evaluated and judged correctly. (Generally, three evaluators visited each school.) While specific differences between high and low schools were not completely consistent, seven factors emerged that seemed to be associated with high-achieving schools. These factors will be identified at the end of this chapter (New York State Education Department, 1976.)

**Pennsylvania.** In the Pennsylvania Plan for Educational Quality Assessment (EQA), one third of the schools are notified each August that they will be evaluated. The superintendent nominates a school representative for grades 5, 8, and 11. The school representatives attend a regional workshop in February about administration procedures. They share this information with classroom monitors at their own school. Testing lasts four hours, usually spread over four days. The answer sheets are anonymous, for the program is concerned with school- and county-level data, not with identifying students and their achievement. There are 400 questions in the questionnaire, divided into six sections; basic verbal and math skills, student knowledge of vocations, social and health habits, feelings towards self and others, values placed on learning and human accomplishments, and method of coping with frustration. The schools are given a detailed report on the results, plus some hours of explanation by EQA staff. Schools are given the predicted scores along with the actual scores. Multiple regression analysis is used to predict the scores. The schools also receive information on their standing on criterion variables. School districts vary greatly in the use that they make of this information. Essentially, it is given to them for informational purposes. The main purpose of EQA itself is to devise a more systematic and objective means of evaluating school performance. In conjunction with several school systems, the Pennsylvania State Department of Education has made in-depth studies of schools whose predicted and actual scores were very different. The findings will be discussed at the end of this section (Pennsylvania State Department of Education, 1978.)

**Delaware.** In Delaware, the basic approach was to perform a case study on six elementary schools selected on the basis of longitudinal data from 1972–1975 and 1973–1976. Three schools that were performing above expectations in reading and mathematics and three that were performing below expectations were studied. Each casy study involved three phases: review of currently available data on the school, series of on-site visits, and an analysis and synthesis of all the data following the on-site visits. The on-site visits lasted between three and four days, depending upon the size of the school. The studies were conducted by a five-member team from the Department of Public Instruction: the state supervisor of research, the state specialist in assessment and planning, the state supervisor of elementary education, the state supervisor for early childhood education, and the state supervisor of mathematics. The study was designed to consider two functional levels within schools, management and instruction. In management, there was a concern for the organizational pattern, school policies, and allocation of goods and services. Under instruction, there was concern for methods and techniques, classroom focus, and use of goods and services. It is important to note that the schools in the Delaware study were not chosen as a result of statistical techniques. The scores of schools across the state were examined by a member of the Department of Public Instruction and local school systems, and schools falling above and below the special achievement levels were nominated. Thus, the design of

this study makes it a comprehensive, exploratory inquiry in many broad areas, not an intensive examination of a single area. The data collected were essentially descriptive. Much of the data reflected perceptions of school staff, although the instrumentation itself was designed to be as objective as possible (Delaware Department of Public Instruction, 1977).

**Maryland.** In Maryland, the exceptional school study was the result of a state-mandated assessment program, the third phase of which was to be a process evaluation. The work was a direct outgrowth of the writings of Henry Dyer and Robert Klitgaard. Data were collected for all 881 elementary schools in Maryland over a three-year period. Each year, an achievement score was predicted for each school. The school's performance on the nonverbal section of Cognitive Abilities Test was used to predict the level of expected performance on the Iowa Tests of Basic Skills. The differences between obtained and predicted scores were called *residuals*. The Cognitive Abilities Test was used to control between-school variance. A distribution over the 881 schools was made, and eighteen schools with high positive residuals and twelve schools with high negative residuals were chosen for study. Subsequently, a team was assembled to visit each school to talk extensively with the principal and teachers. Four different sets of questionnaires were developed, with two subsets in each set, one concerned with statistical background information, the other with attitudes. A set was developed for principals, teachers, students, and aides. A random sample consisting of every fourth child in grades 3 and 5 of the thirty schools studies was constructed. In addition to the questionnaires and the many visits of the evaluation team to the schools, classroom observations were also conducted, and an analysis of them was performed. It is important to note that the only predictive variable in the Maryland study was cognitive ability. It had been determined from a number of previous studies in Maryland that one could account for most of the between-school variation by using students' socioeconomic status background variables or students' intelligence in the regression equation. Since intelligence scores were more readily available and considered more accurate, they were used as the primary dependent variable. The Maryland findings will be discussed in the next section (Maryland State Department of Education, 1978.)

## Findings

One of the most interesting and impressive findings of the present study is that the characteristics of exemplary schools are surprisingly similar regardless of whether they are identified by expert authority or by the regression model. This supports the idea that the identified characteristics are probably generalized and not method-specific. The characteristics are especially credible because they have a commonsense confirming quality to them. In addition, it is important to note that in studies where so-called blind judges visited exemplary schools at both extremes of the distribution, they were quite

successful in identifying the school's placement on the distribution, being correct 81 percent of the time.

One can summarize the findings of the research reported here by saying that the greatest asset of an exemplary school is its firm leadership; because of that leadership, students in exemplary schools believe that they can control their own destinies.

The following characteristics, which typify successful exemplary schools, were identified in these six studies. They are presented here as a composite list for clearer reading and study.

Exemplary schools have principals who

- Create a sense of direction for the school
- Execute their designated leadership role
- Foster academic expectations
- Recruit their own staff
- Have more advanced training
- Tend to have an education as elementary school teachers
- Have particular competence in one area of the curriculum, such as reading or mathematics.

Exemplary schools are staffed by teachers who

- Demonstrate proficiency in verbal skills
- Have substantial educational background
- Are experienced
- Have achieved employment status; that is, job satisfaction and salary level
- Have high expectations for the pupils
- Have better control of classes with less overt effort
- Are supported in their expectations by the principal and the parents
- Tend to use grouping procedures that emphasize small instructional groups for reading and mathematics but use the whole-group approach for social studies, science, and health.

Exemplary schools are composed of students who

- Possess a sense of control of their own destiny
- Believe that how well they do in school depends more upon hard work than upon luck
- Understand from the principal, the teachers, and their parents that all three groups have high expectations for their achievement.

Exemplary schools are schools where parents

- Are an integral part of the educational process
- Are involved in decisions being made about their children's future
- Feel that they are real partners with school administrators and educators in educating their children.

Exemplary schools have high expectations

- For all students regardless of socioeconomic background variables, race, or handicap

- For all teachers regardless of their background, training, or former experience
- For all aides regardless of their background and training
- For the principal and for other administrators of the school
- For all staff people associated with the school, including office staff, kitchen staff, janitorial staff, and others.

Organizationally, exemplary schools

- Tend to have a high degree of articulation, particularly in reading and mathematics
- Base inservice staff development programs on needs identified by the school staff, not by the central office
- Give very high priority to time in the school day for instructional activities.

Instructional practices in exemplary schools

- Require that academic objectives be clearly identified and stated
- Tend to use small-group and individualized instruction for mathematics and reading; whole-group instruction for other curriculum areas
- Encourage direct instruction by the teacher
- Consider prior learning and learning styles of the students.

## Summary and Conclusions

The basic question that one must ask about the exemplary school research reported here is: were the methods used to identify the exceptional schools valid? The answer seems to be yes, if the reader agrees that an unusual degree of success as measured by standardized achievement tests indicates that a school is an outlier.

A second and related question is: are the schools identified as exceptional, particularly those identified by the regression analysis method, simply statistical artifacts, or are they importantly different in process and characteristics? Again, the evidence suggests that the schools identified by the regression method behave in very special and different ways that cannot be accounted for by chance or by statistical error.

The next issue that needs to be raised is that of the indicators that seem to identify these schools as different, that is, leadership style, teachers and teaching practices, instructional emphasis, and parental and community involvement. How do the ways in which these resources are used in exceptional schools differ from the ways in which they are used in other schools? The answer seems to lie in what the author chooses to call *mediating structures*. This term was introduced by Dr. David Elkind of Tufts University, who meant that it is the beliefs that children hold about themselves and their abilities, built in those children by the adults with whom they interact, and the

mediating structures—the judgments and comments of adults, insights shared with the child, interpretations of what is being seen and talked about—that make the greatest impact on the child. A good example of the effects of such structures is provided by prejudice. Children are born without prejudice. They learn it from their parents and other adults. They learn it by adult interpretation of hundreds of situations that the child and adult share. Something similar seems to take place in the exceptional schools. The child comes into contact with adults who constantly mediate the material that is being presented to the child and the situation to which the child is being exposed. A surprisingly high number of mediating structures in these exceptional schools are presented to the child in a positive sense, particularly as they reflect on the child's self-concept of his or his ability to interpret the situation and to gain some insight into his or her own competence in a wide variety of areas.

Let us examine five of the major characteristics of exemplary schools identified in this chapter from the perspective of mediating structures. The first and most important area in exceptional schools is leadership. Commonly, but not exclusively, this leadership rests with the principal. The principal is seen by students, teachers, other adults in the school, and parents as a dynamic, forceful, resourceful, and competent person. All those perceptions of the principal or the person who assumes the leadership result from interpretations of his or her actions in a thousand different situations by the individuals making the observation. The principal holds high expectations (a mediated set of perceptions) for the school, the teachers, the parents, the other adults of the school, and the children. The leadership style of the principal causes most of the adults and children with whom he or she comes into contact to hold a positive opinion about the school, the students, and their ability to be successful. This leadership style is probably the key component of the exceptional school.

If we turn our attention to the teachers and the adult staff in the school, we find that many of the characteristics of the principal are also found in the teachers. The teachers tend to be more mature, more experienced, more capable, and more dedicated than teachers in schools that are not as successful.

In the area of teaching practice, the exceptional-schools have inservice programs oriented towards needs that the teachers have identified. There is an emphasis on planning, and there is a concentration on the traditional aspects of education, namely the three Rs. There is also an unusually high degree of and concern for articulation between one grade level and another. The successful schools tend to select a single textbook series and see that it is used by all teachers at all levels. Another way of stating this feature of the successful schools is that the faculty have an unusually high degree of agreement about what is important and about the areas on which they are going to concentrate.

In the area of curriculum, reading and mathematics achievement tend to be emphasized. The learning environment is highly structured, and it is

predicated on the expectation that all children can master the material presented to them. Instruction tends to be small-group, rather than individualized or large-group.

The last area of identified concern is parental involvement. Almost all the exceptionally successful schools have involved parents in the ongoing activities of that school in real and important ways. If the school is not being supported by the home; if, as noted elsewhere in this chapter, the mediating structures of the parents do not reinforce what is presented to the children each day in school; if the parents do not help the children to continue to believe that they can succeed in school; if the parents are not supportive of what is being done at the school; if the parents do not make positive comments about the school; and if the parents do not reinforce what the child is being told about his or her ability to succeed, it is going to be enormously more difficult for the school to be successful.

## Policy Implications

Two important policy issues are highlighted by this research. First, state testing programs, by a variety of methods, can be used to identify schools that perform in an exemplary fashion, either poorly or very well, and a great deal can be learned about successful school processes by studying the schools thus identified. Second, educational policymakers can look at the set of characteristics identified by the study of exemplary schools to see if they are present in a school about which there is concern. The identified characteristics establish a base from which policymakers can start to ask questions.

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